



Teaching and Learning of the Nemeth Braille Code

- Modifiers
- Modified Expressions
- Contracted Form of Modification
- Recurring Digits in Decimal Numbers
- Contractions in Modified Words


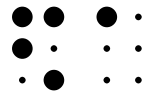

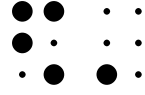






Modifiers

- Definition
 - A superscript or subscript placed directly over or directly under a mathematical expression
- Commonly Used Symbols
 - Arcs, Arrows, Bars, Dots, Tildes, etc



Arcs and Bars

- Arc Concave Upward  
- Arc Concave Downward  
- Horizontal Bar (wh)  
- Vertical Bar  

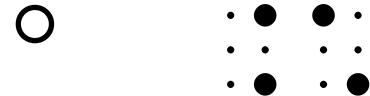


Dots, Tilde, and Delta

■ Dot



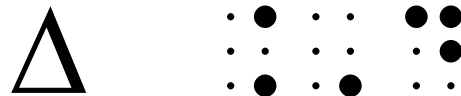
■ Hollow Dot



■ Tilde


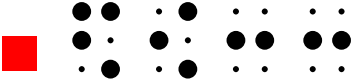
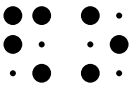
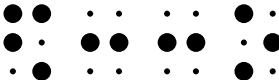


■ Delta





Arrows

- Barbed at both ends \leftrightarrow
 - 
- Barbed at the left \leftarrow
 - 
- Barbed at the right \rightarrow
 - Contracted 
 - Uncontracted 

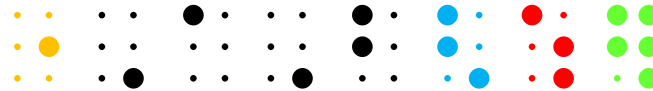


Modified Expressions

- Five Step Rule – in order
(never separate parts)
 - The multipurpose indicator ∴
 - Expression being modified
 - Directly over ∴ or under ∴ indicator
 - Modifier
 - Termination indicator ∴

Examples

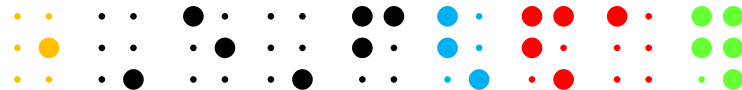
■ \overline{AB}



■ \overleftrightarrow{CD}



■ EF

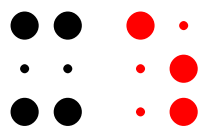
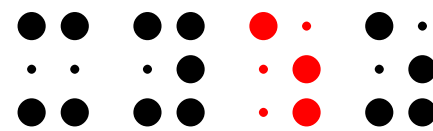
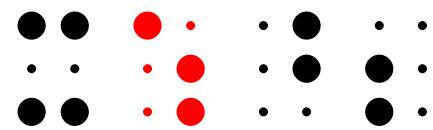
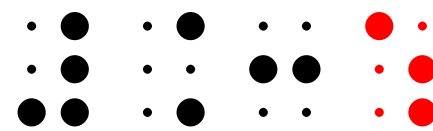


Contracted Form of Modification



- A single digit or letter modified by a horizontal bar directly over it
- Expressed simply by transcribing the digit or letter followed by the bar
- Use whenever possible

Examples

■	\overline{x}	
■	\overline{xyz}	
■	$\overline{x^2}$	
■	$\overline{.3}$	

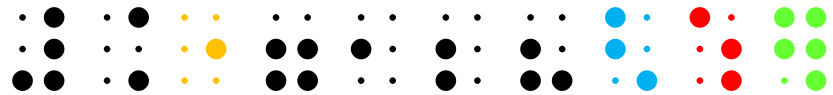
Recurring Digits in Decimal Numbers



- Uses a horizontal bar or a dot above what is recurring in a decimal number
- In braille, a single dot or horizontal bar is used. Why aren't more needed?

Examples

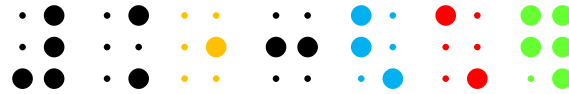
■ $\overline{.7128}$



■ $3.57\overline{29}$



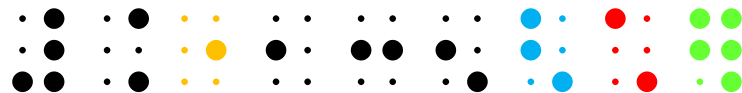
■ $\dot{.3}$



■ $.1\dot{3}5$



■ $\dot{.1}\dot{3}5$



■ \ddot{x}



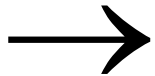


Contractions in Modified Words

- Contractions may not be used in a word or abbreviation that is in contact with any modifier symbol
- The PI must be used before punctuation that follows a modified expression

Examples

heat



Δ



■ One ninth = $\bar{1}$.





Assignment

- p. 77 all